

REMARKS

I. Status of the Claims

Claims 1-24 are pending in this application. Claims 1, 4, 5 and 7-24 stand rejected. Claims 2, 3 and 6 are withdrawn from consideration. No claim has been amended.

II. Advisory Action

The Patent Application Information Retrieval (PAIR) system lists the most recent correspondence from the Office dated November 30, 2007 as an Advisory Action.

Although Applicants assume this is correct, the Office did not provide a cover sheet with this correspondence. Therefore, Applicants wish to clarify for the record that the in Response to Final Office Action dated July 19, 2007 was entered into the record and that the paper mailed November 30, 2007 is an Advisory Action. For the arguments below, Applicants assume this to be correct.

III. Background

The present invention relates to a microporous polyethylene film having excellent mechanical strength, permeability, low fusing temperature, and high heat resistance. See *Specification* at pp. 3-5. This film overcomes the limitations of the known literature where it was difficult to produce microporous polyethylene film in such a well-balanced manner. See *id.*

In particular, the present invention achieves desirable, yet combined, microporous film properties such as film rupture temperature, film thickness, porosity,

air permeability, puncture strength, and fusing temperature by specifically modifying the α -olefin content of the comonomer as claimed. See *Specification* at pp. 18-21. The specifically claimed α -olefin unit content is a critical factor, and accounts for the distribution of the above properties within acceptable ranges. As such, the comonomer content of the claimed microporous membranes overcomes the limitations of earlier literature by providing the above properties in a well-balanced manner, rather than improving one property at the expense of another.

IV. Response to Claim Rejections

A. Rejections Under 35 U.S.C. § 102(b)

In the Advisory Action dated November 30, 2007, the Examiner has maintained the rejections set forth in the Final Office Action dated July 19, 2007. See *Final Office Action* at pp. 2-7. In particular, the Examiner continues to reject claims 1, 4, 5 and 7-14 as being anticipated by U.S. Patent No. 6,245,272 ("Takita"), as evidenced by the Concise Encyclopedia of Polymer Science and Engineering ("Encyclopedia"), p. 354. Applicants disagree with the aforementioned rejections for at least those reasons of record, and for the following additional reasons.

Neither reference, whether taken singularly or together, teach each and every element of the claims. Also, the Court of Appeals for the Federal Circuit has established that a claim to a genus does not necessarily render a later claim to a species anticipated unless the prior disclosure teaches the selection of the species from within that genus. See *Eli Lilly & Co. v. Bd. of Regents of Univ. of Wash.*, 334 F.3d 1264, (Fed. Cir. 2003).

Takita does not teach the claimed α -olefin comonomer content, or teach copolymers having the claimed α -olefin content. Takita read in light of the Encyclopedia does not teach the claimed α -olefin comonomer content. For at least these reasons, the anticipation rejection is overcome.

B. Rejections Under 35 U.S.C. § 103(a)

The Examiner continues to reject claims 1, 4, 5 and 7-14 as being obvious over U.S. Patent No. 6,245,272 ("Takita"), as evidenced by the Concise Encyclopedia of Polymer Science and Engineering ("Encyclopedia"), p. 354. Applicants disagree with the aforementioned rejections for at least those reasons already of record, and for the following additional reasons.

The Examiner has not established that the cited references singularly or when taken together provide one of ordinary skill in the art a reason to optimize the elements or properties claimed, or teach or suggest how the proper selection of a myriad of such parameters would result in a product of the claimed invention. The case of *Takeda Chemical Industries, Ltd v. Alphapharm Pty., Ltd. and Genpharm, Inc.*, 492 F.3d 1350 (Fed. Cir. 2007) is illustrative of this point. In Takeda, the issue was whether the single substitution of an ethyl group for a methyl group on a structurally similar thiazolidinedione, which was employed for antidiabetic purposes, was obvious. *Id.* In this post-KSR opinion from the Federal Circuit, the court stated that "in cases involving new chemical compounds, it remains necessary [post-KSR] to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish *prima facie* obviousness of a new chemical compound." *Id* at 1357. The court

found that the defendant had not established a *prima facie* case of obviousness because it failed to show that "the prior art would have led to the selection of compound b as a lead compound." *Id.* at 1362-1363 (emphasis added).

Similarly in the present case, neither the cited references nor the Examiner identify any reasons why one skilled in the art would have modified the α -olefin content in Takita or the Encyclopedia in the manner recited by the claims. There is nothing in the prior art cited by the Examiner that provides any such reason or that could arguably suggest a reason. The cited art fails to identify improvements in any of the recited film properties as a reason to arrive at the recited α -olefin content.

The present invention relates to polyethylene films having, *inter alia*, improved film rupture temperatures resulting from a concomitant use of an HDPE copolymer and an HDPE and recited α -olefin content. See *Specification*, Table 1. However, Takita does not teach microporous films with improved rupture temperatures, or provide reasons why the α -olefin content of a blend of HDPE copolymer and HDPE is relevant to the overall microporous film properties. One of ordinary skill in the art would not seek to modify α -olefin content of the whole blend of HDPE copolymer and HDPE based on Takita, to improve, *inter alia*, film rupture temperatures. Takita's deficiencies must be remedied by the Encyclopedia.

However, the Encyclopedia does not provide reasons why a higher α -olefin content of the blend of HDPE copolymer and HDPE (within the claimed range) is needed or that rupture temperatures improve under such circumstances. The combination of Takita and the Encyclopedia do not provide any reason for modifying α -olefin content of the blend of HDPE copolymer and HDPE, or otherwise disclose a

relationship between the α -olefin unit content and the overall improved properties of the invention. Moreover, as stated in the attached Declaration under 37 C.F.R. § 1.132 of Masahiro OHASHI ("Declaration"), such relationships were not even known in the art at the filing date of the present invention. *See Declaration* at page 3.

Finally, a species can be patentable when unexpected results are shown. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1371 (Fed. Cir. 2007). Applicants would like to direct the Examiner's attention to the evidence of unexpected results presented in the Declaration at pages 4-10.

For at least the aforementioned reasons and the new evidence submitted by Declaration, Applicants respectfully request that the rejections be withdrawn.

V. Conclusion

In view of the foregoing remarks, Applicants request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: 

Michael R. McGurk
Reg. No. 32,045

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Attachment: Declaration of Masahiro Ohashi